National Biodiesel Board
P O Box 104898
Jefferson City, MO
65110-4898
(573) 635-3893 *ph*
(800) 841-5849
(573) 635-7913 *fax*
www.biodiesel.org

House Subcommittee on Energy and Air Quality
"Vehicle and Fuels Technology: Next Generation"
May 24, 2006

Testimony of Scott Hughes, Director of Governmental Affairs, National Biodiesel Board

Good afternoon Mr. Chairman, Ranking Member Boucher, and committee members. It is a pleasure to be here today. We appreciate the committee holding this hearing and providing the opportunity to examine this important issue.

My name is Scott Hughes, Director-Governmental Affairs, with the National Biodiesel Board (NBB). The NBB is the national not-for-profit trade association representing the commercial biodiesel industry as the coordinating body for research and development in the US. State soybean commodity groups who were funding biodiesel research and development programs, founded NBB in 1992. Since that time, the NBB has developed into a comprehensive industry association, which coordinates and interacts with a broad range of stakeholders including industry, government, and academia. NBB's membership is comprised of state, national, and international feedstock and feedstock processor organizations, biodiesel suppliers, fuel marketers and distributors, and technology providers.

In examining vehicle and fuels technology with a focus on the future, I would like to focus my comments on providing background about biodiesel, the industry, as well as an overview of the collaborative work between the biodiesel and engine/automakers, and the role we see biodiesel having in the national energy pool.

Biodiesel

Biodiesel is a cleaner burning, renewable diesel fuel replacement made from agricultural fats and oils meeting a specific commercial fuel definition and specification. Soybeans are the primary oilseed crop grown in the United States, and soybean oil makes up about half of the raw material available to make biodiesel. The other half consists of all other vegetable oils and animal fats. Biodiesel is made utilizing a chemical reaction process where the oil/fat is reacted with an alcohol to remove the glycerin in order to meet specifications set forth by the American Society for Testing and Materials (ASTM). Biodiesel is one of the best-tested alternative fuels in the country and the only alternative fuel to meet all of the testing requirements of the 1990 amendments to the Clean Air act.

Industry Background & Overview

In the early 1990's, soybean farmers struggled to maintain profitability because of high energy prices and low commodity prices. Investment in the development of a biodiesel industry was a priority to farmers eager to contribute to our energy supply, while finding ways to add value to their crops. Farmers have invested more than $50 million of their check-off dollars to date to conduct research and development on biodiesel. Much of that effort has focused on the testing of biodiesel to ensure performance, establish quality standards, and gain acceptance by engine and equipment manufacturers.

The biodiesel industry has shown slow but steady growth since the early 90's, however, in the past two years, it has grown exponentially. In 2004 there was approximately 25 million gallons of biodiesel sales. That increased to 75 million gallons in 2005. We are currently on track to exceed 150 million gallons in 2006. Likewise, we went from 22 biodiesel plants in 2004 to more than 60 biodiesel plants currently (395 million gallons of production capacity). There are over

40 more plants currently under construction (estimated additional 713 million gallons of production capacity), with another 30 projects in pre-construction.

Biodiesel is primarily marketed as a blended product with conventional diesel fuel typically in concentrations up to 20%. It is distributed utilizing the existing fuel distribution infrastructure with blending most commonly occurring "below the rack" by fuel jobbers. Biodiesel is beginning to be distributed through the petroleum terminal system. To date, biodiesel has positions in approximately 25 terminals. We anticipate this trend to increase.

Three major factors are contributing to the industry's current strong growth: relatively stable feedstock prices, crude oil prices, and public policy (federal and state). The combination of these drivers has made biodiesel priced more competitive in the market. As a result, we are starting to see biodiesel entering several new price sensitive markets.

Historically biodiesel's primary markets have been regulated fleets (alternative fuel use/petroleum reduction—EPAct, Executive Order 13149) and the agricultural industry. However, biodiesel is increasingly being introduced into private sector fleets, home heating oil, light duty diesel vehicles, marine applications, and even some electrical generation. These markets all represent significant volume opportunities for industry.

The industry's early investment in technical research; pursuit of an ASTM standard; public education efforts; outreach to automakers, engine and component makers, and the petroleum industry are allowing us to maximize our growth potential under current market dynamics.

Regulatory and Policy Impacts

The need for increased use of biofuels has never been more pressing with diesel fuel prices at an all-time high. As crude oil prices continue to rise, America's trade deficit continues to balloon. America relies on imports for 60 percent of its petroleum needs. Imported petroleum makes up the single largest component of our national trade deficit amounting to approximately one third of the total. Every gallon of domestic, renewable biodiesel that is used to replace diesel fuel refined from imported crude reduces the need for imported crude and finished fuel, extends the diesel supply, and expands domestic refining capacity. Even a small reduction in demand has a positive effect on straining price pressures.

The majority of diesel fuel in this country is used in over-the-road trucks. The trucking industry serves as a critical part of our economy, and impacts every industry, business, and consumer in America. Virtually every product that we use everyday is brought to us by a diesel-powered truck. Fuel is the single largest operational cost in the trucking industry. Average diesel fuel prices have nearly doubled over the past four years. This dramatic increase in operational cost offers enormous challenges to the trucking industry, and will be felt throughout our entire economy.

The American Trucking Association (ATA) has endorsed the use of B5 as a way to supplement our nation's energy supply. Likewise, Sysco Corporation, the largest private truck fleet in the nation has begun using B5 it its trucks. Truckers often become interested in biodiesel because they would rather rely more on farmers for their fuel and less on the Middle East. However, after they begin using it, they are most often impressed by its premium fuel characteristics. Biodiesel contains oxygen so it burns cleaner, reduces smoke and smell, increases cetane, and improves lubricity. As ultra-low sulfur diesel (USLD) fuel gets phased in beginning in June of this year through June of 2007, biodiesel is well positioned to replace the lubricity that will be

lost in ULSD. Diesel fuel injection systems rely on the lubricating characteristic of fuel to keep them functioning properly. Just 2 percent biodiesel can improve lubricity by as much as 65 percent.

Recent regulatory changes aimed at improving the emission profile of diesel engines and improving air quality requires significant advancement in engine and emission control technologies. Auto and engine-makers are stepping up to meet the challenges presented by these regulatory standards which take effect in model years 2007/2010.

A critical element in meeting these standards will be the fuel that is used in advanced engine and emission control technologies. Biodiesel will be a fuel used in these engines and consumers are ever increasing their demand for biodiesel both in fleet applications and light-duty passenger markets. It is therefore imperative the necessary research is conducted to demonstrate biodiesel's compatibility with new engine technologies to meet this growing demand.

The biodiesel and OEM industries are committing significant resources toward this effort. The biodiesel industry has spent $1.4 million dollars to date with an additional $700,000 committed for fiscal year 2007. Automakers and engine makers are also committing significant time and resources toward this effort.

Additionally, three federal policy measures have been extraordinarily effective in stimulating biodiesel's increased production and use. Because of these three policy measures, biodiesel is beginning to make a small but significant impact on our nation's energy supply. These three measures are all working extraordinarily well, but are soon scheduled to expire, and must be continued in order to keep the growth in biodiesel going strong.

First, the biodiesel blenders tax credit, which was part of the restructured Volumetric Ethanol Excise Tax credit or "VEETC" legislation in the JOBS Act of 2004. The new blender's tax credit for biodiesel went into effect in January of 2005. It functions similarly to the ethanol tax credit, and it has been extraordinarily effective incenting the blending of biodiesel into the nation's diesel fuel supply. It has been the primary stimulant in 2005 for the dramatic increase in new plants, jobs, and local investment in biodiesel, bringing economic opportunity to both rural and urban areas.

The second policy measure that has been very effective in energizing biodiesel's growth is the Bioenergy Program. The program was initiated by the USDA in 2000 to stimulate the use of crop surpluses for energy needs. It was memorialized as part of the 2002 Farm Bill. However, the program is set to expire in July of this year. This program provides a production incentive which has been highly effective in the growth of the biodiesel industry. A 2005 OMB Program Assessment Rating Tool or "PART" evaluation reported that the program did an excellent job of stimulating biodiesel growth, and indicated that the program could continue to be effective for the emerging biodiesel industry. The report stated, "Increases in the production of biodiesel indicate a rise in the supply of domestically produced renewable fuels. It's also an indicator of the viability of the biodiesel industry and its expanded consumption of agricultural commodities."

The third program that has greatly contributed to biodiesel's success is the USDA's Biodiesel Fuel Education Program. This program was a part of the energy title of the 2002 Farm Bill. The program provides educational funding to support increased fuel quality measures, increased acceptance of biodiesel by engine and equipment manufacturers, petroleum partners, users, and the general public. The USDA has done a superb job in implementing this program and it has been a key ingredient to biodiesel's recent growth. A recent survey done to benchmark the

program's progress showed that the public's awareness of biodiesel rose from 27 percent in August 2004 to 41 percent in December of 2005. To impact the American public's awareness that significantly on any given issue is remarkable. In addition to greater awareness from the general public, market research shows familiarity among trucking executives increased from 27 in 2004 to 53 in 2005. Also of note:

- Four-in-five consumers continue to support a tax incentive that would make biodiesel cost-competitive with regular diesel fuel.
- 88 percent of environmental group leaders and 84 percent of health organization leaders support biodiesel as a transitional fuel, because biodiesel can make an immediate impact on reducing emissions until zero emissions technology is developed.

Looking Ahead

We foresee strong growth for biodiesel and it becoming further integrated into the national fuel distribution system and energy pool.

During the 2006 State of the Union speech, President Bush outlined his Advanced Energy Initiative, which stated the goal of reducing petroleum imports from the Middle East by 75 percent by the year 2025. Biodiesel and ethanol can be the first tools used to begin reaching that goal, because they are liquid renewable fuels that are available right now, ready for blending into our existing fuel supply and used in our existing vehicles. As an illustration of how biodiesel can play a role in that effort, please note that Iraq is the second largest provider of crude oil into the United States from the Persian Gulf region. Of the crude that comes from Iraq, approximately 1.85 billion gallons of diesel fuel is refined for the US market. If long-term, America was to replace just 5 percent of its 37 billion gallons of on-road diesel fuel with biodiesel, it would equal 1.85 billion gallons – the same amount of diesel fuel that we get from Iraq.

In addition to the significant benefits that biodiesel offers to increase our domestic refining capacity and overall energy supply, biodiesel offers enormous benefits to our agricultural sector. Biodiesel does much more than just utilize surplus agricultural commodities; it adds multiple layers of value to agricultural economics. There have been 5 major comprehensive economic studies evaluating biodiesel in the last 4 years. All of these studies, using different economic models, had similar conclusions: that increased utilization of fats and oils for biodiesel increases the value that farmers receive for their crops, while making protein meal cheaper as a feed for our domestic livestock producers and more competitive in international protein markets for food and feed. Not only does this allow farmers to more profitably supply global food markets, it may have the effect of increasing agricultural processing in the United States. Additional biodiesel production further increases domestic chemical processing from renewable by-products.

Conclusion

Rising crude oil prices and political uncertainties in strategically sensitive regions of the world are focusing the public's attention on the need to enhance our nation's energy security. Biofuels are a viable option to begin re-taking control of our energy future. There are many market dynamics that are working in favor of the biofuels industry today and which if continue into the future, as anticipated, will provide a bright future not only for the industry but the nation overall.

Biodiesel is and will continue to be a strong player and partner in the growth of the biofuels industry. Biodiesel can be a substantial tool in the nation's overall move toward energy security as it:

- Adds to the distillate fuel pool;
- Adds to U.S. "refining" capacity;

- Directly replaces imported finished diesel fuel;
- Utilizes domestic agricultural products;
- Stimulates rural and urban economies and creates jobs; and
- Helps potentially create new chemical industry jobs and activity.

Mr. Chairman, members, we appreciate the opportunity to come before you today on this most critical issue. On behalf of the biodiesel industry, I want to thank you for all of the support you have given not only to the biodiesel industry, but the development of the biofuels industry overall. We look forward to continue working with you in this important endeavor. I would be happy to answer any questions you may have.